CLAIMS

1. Method of monitoring patient compliance and bioavailability of drugs contained in body fluids comprising the following steps:

(a) mixing and shaking mechanically the body fluid with aqueous zinc sulfate solution, an appropriate solvent and, optionally an antioxidizing agent to precipitate proteins and strip off bound drug;

(b) centrifugating the mixture to obtain the separation of phases;

(c) recovering the supernatant and proceed to drug concentration measurement.

2. Method according to claim 1 wherein the concentration of the aqueous zinc sulfate solution varies from 0.1M to 5.0M.

3. Method according to claim 3 wherein the concentration of the aqueous zinc sulfate solution varies from 0.2M to 1.0M.

4. Method according to claim 1 ~~to 3~~ wherein the appropriate solvent is a polar, a nonpolar or mixtures thereof.

5. Method according to claim 4 wherein the nonpolar solvent is an organic solvent selected from the group consisting of acetonitrile/2-propanol (1:1), benzene, toluene, dichloromethane, chloroform or mixtures thereof.

6. Method according to claim 4 wherein the polar solvent is selected from the group consisting of water, alcohols or mixtures thereof.

7. Method according to claim 1 wherein ascorbic acid is the antioxidizing agent used in step (a).

8. Method according to claim 1 wherein the drug concentration measurement is carried out by using a colorimetric assay or a High-Performance Liquid Chromatography method.

9. Method according to ~~claims 1, 3, 5 and 7~~ Claim 1 wherein the drug to be analyzed is rifampicin.

10. Method according to claim 1 wherein the drug to be analyzed is selected from the group of antimonials, itraconazole and proteinase or the reverse transcriptase inhibitors.

11. Method of monitoring patient compliance and bioavailability of rifampicin contained in body fluids comprising the following steps:

(a) mixing and shaking mechanically the body fluid with aqueous zinc sulfate solution, an organic solvent selected from the group consisting of acetonitrile/2-propanol (1:1), benzene, toluene, dichloromethane, chloroform or mixtures thereof and, optionally an antioxidizing agent to precipitate proteins and strip off bound drug;

(b) centrifugating the mixture to obtain the separation of phases;

(c) recovering the organic phase supernatant and proceed to drug concentration measurement by using a colorimetric assay or a High-Performance Liquid Chromatography method.

12. Method according to claim 11 wherein the concentration of the aqueous zinc sulfate solution varies from 0.1M to 5.0M.

13. Method according to claim 12 wherein the concentration of the aqueous zinc sulfate solution varies from 0.2M to 1.0M.

14. Method according to ~~claims 11 and 13~~ claim 11 wherein the solvent used in step (a) is acetonitrile/2-propanol (1:1).

15. Method according to claim 11 wherein ascorbic acid is the antioxidizing agent used in step (a).

16. Method according to claim 11 wherein the rifampicin concentration is determined through spectrophotometric measurement at 340 nm.

17. Kit for measuring rifampicin concentration in a body fluid containing the following components:

(a) a standard solution of aqueous zinc sulfate optionally having an antioxidizing agent;

(b) an organic solvent selected from the group consisting of acetonitrile/2-propanol (1:1), benzene, toluene, dichloromethane, chloroform or mixtures thereof;

(c) serum standards containing a known amount of rifampicin to prepare the standard curve for the user conditions.

18. Kit according to claim 17 wherein the concentration of the aqueous zinc sulfate solution varies from 0.1M to 5.0M.

19. Kit according to claim 18 wherein the concentration of the aqueous zinc sulfate solution varies from 0.2M to 1.0M.

20. Kit according to claim 17 wherein ascorbic acid is the antioxidizing agent.

21. Kit according to claim 17 wherein the organic solvent is acetonitrile/2-propanol (1:1).